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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

28 JUN 2004

Applicant's or agent's file reference 9396 WO/UR	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE 2002/002436	International filing date (day/month/year) 20.12.2002	Priority date (day/month/year) 28.12.2001
International Patent Classification (IPC) or national classification and IPC H04Q 7/38		
Applicant ABB AB ET AL		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 7 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 24.07.2003	Date of completion of this report 23.02.2004
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Oskar Pihlgren/MN Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/SE 2002/002436

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- ☐ the international application as originally filed/furnished

- ☒ the description:

pages 1-18 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☒ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 1-7 _____ received by this Authority on 09-02-2004

pages* _____ received by this Authority on _____

- ☒ the drawings:

pages 1-6 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (specify): _____

☐ any table(s) related to the sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International Application No.

PCT/SE 2002/002436

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims

1-35

YES

Claims

NO

Inventive step (IS)

Claims

1-35

YES

Claims

NO

Industrial applicability (IA)

Claims

1-35

YES

Claims

NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1: WO 00/01172 A1

D2: WO 00/04730 A1

D3: EP 1130933 A1

The cited documents represent the general state of the art.

The invention defined in claims 1-35 is not disclosed by any of these documents.

The cited prior art does not give any indication that would lead a person skilled in the art to the claimed method and system in an industrial automation facility for communicating information between a central control system and movable user terminals. Therefore, the claimed invention is not obvious to a person skilled in the art.

Accordingly, the invention defined in claims 1-35 is novel and is considered to involve an inventive step. The invention is industrially applicable.

CLAIMS

1. Communication method in an industrial automation facility (40; 70; 90), having a central control and information system (1) and a number of movable user terminals (13) having an information display, and where the control and information system has access to data bases (2) comprising extensive information of the industrial automation facility (40; 70; 90), comprising the step of:

providing said central control and information system (1) with an identification of a user of a first user terminal (13),

characterised by the further steps of:

determining a present location of said first user terminal (13);

selecting a data quantity from the databases (2) depending on at least both the identification (9) and the present location (11);

where the selected data quantity forms a reduced part of the extensive information about the industrial automated facility (40; 70; 90), adapted to the users specific needs.

communicating said data quantity from the central control and information system (1) to the first user terminal (13); and

presenting the first data quantity for said user on the information display of the first user terminal (13),

whereby the user is provided with most relevant facility information at each instant without taking active measures.

2. Communication method according to claim 1, **characterised in that** the selecting step is dependent also on at least one of:

- the history of communication to and from said first user terminal (13),
- the operational situation of said industrial facility (40; 70; 90), time, and
- date.

3. Communication method according to claim 1 or 2, **characterised by** the further steps of:

inputting data to the first user terminal (13); and

communicating the inputted data to said central control and information system (1);

whereby said selecting step being dependent also on the inputted data.

5 4. Communication method according to claim 3, **characterised in that** the inputted data is representative of a predetermined activity of the user.

5. Communication method according to claim 4, **characterised in that** the predetermined activity is selected from the list of:

10 maintenance;

supervision; and

education.

15 6. Communication method according to any of the claims 1 to 5, **characterised in that** communication to and from the first user terminal (13) is performed wireless.

20 7. Communication method according to claim 6, **characterised in that** the location determining step is performed in the first user terminal (13), and by the further step of communicating data representing the determined location to said central control and information system (1).

25 8. Communication method according to claim 6, **characterised in that** the location determining step is performed in the central control and information system (1).

9. Communication method according to any of the claims 1 to 5, **characterised in that** communication to and from the first user terminal (13) is performed via stationary connection blocks (28).

30 10. Communication method according to claim 9, **characterised in that** the location determining step in turn comprises the steps of:

determining which stationary connection block (28) the first user terminal (13) is connected to; and

relating the determined stationary connection block (28) to a physical location by a predetermined database.

5
11. Communication method according to any of the claims 1 to 10, **characterised in that** the location determining step comprises the step of relating the first user terminal (13) to a zone (30; 30A-K) of predetermined spatial extent, whereby the selecting step being dependent on the identity of
10 said zone (30; 30A-K).

12. Communication method according to claim 11, **characterised in that** the predetermined spatial extent of said zone (30; 30A-K) is dependent on said user identification.

15
13. Communication method according to any of the claims 1 to 12, **characterised in that** the selected data quantity comprises operational data of the industrial automation facility (40; 70; 90).

20
14. Communication method according to any of the claims 1 to 13, **characterised by** the further step of communicating data to and/or from stationary user terminals.

25
15. Communication method according to any of the claims 1 to 14, **characterised by** the further step of communicating data to and/or from external networks (63).

30
16. Communication method according to any of the claims 1 to 15, **characterised by** the further step of relating the identification to at least one of:

authorisation profile;
education profile;
organisation position; and

priority.

17. Communication system in an industrial automation facility (40; 70; 90), comprising:

5 a central control and information system (1);
a number of movable user terminals (13) having an information display; and

identification providing means (9) for providing said central control and information system (1) with an identification of a user of a first user terminal (13);

0 whereby the central control and information system (1) having access to at least one database (2),

whereby the database (2) comprises extensive information about the industrial automation facility (40; 70; 90),

1.5 **characterised by:**

locator means (11) for determining of a present location of the first user terminal (13);

2.0 selector means for selecting a data quantity from said database (2), whereby selector means being connected to at least both said identification providing means and the locator means;

whereby the selected data quantity comprises a reduced part of the extensive information about the industrial automation facility (40; 70; 90), adapted to the user's specific need; and

2.5 communication means for communicating the selected data quantity from said selector means to the first user terminal (13);

whereby the information display of the first user terminal (13) being arranged for presenting the selected data quantity for the user;

whereby said user is provided with most relevant facility information at each instant without taking active measures.

3.0 18. Communication system according to claim 17, **characterised in that** the selector means has access to additional information selected from the list of:

the history of communication to and from the first user terminal (13),
the operational situation of said industrial facility (40; 70; 90),
time, and
date.

5
19. Communication system according to claim 17 or 18, **characterised in that** the first user terminal (13) further comprises means for inputting data and in that the communication means is arranged also for communicating data from said first user terminal (13) to the central control and information system(1), whereby the selector means having access to at least a part of the data from said first user terminal (13).

10
20. Communication system according to claim 19, **characterised in that** the inputted data is representative of a predetermined activity of the user.

15
21. Communication system according to claim 20, **characterised in that** the predetermined activity is selected from the list of:
maintenance;
supervision; and
20 education.

22. Communication system according to any of the claims 17 to 21, **characterised in that** the communication means is a wireless communication means.

25
23. Communication system according to claim 22, **characterised in that** the first user terminal (13) comprises the locator means, the communication means being arranged to communicate data representing the determined location to the central control and information system (1).

30
24. Communication system according to claim 22, **characterised in that** the central control and information system (1) comprises said locator means.

25. Communication system according to any of the claims 17 to 21, **characterised in that** the communication means comprises wires connected via stationary connection blocks (28).

5 26. Communication system according to claim 25, **characterised in that** the locator means in turn comprises:

means for determining which stationary connection block (28) the first user terminal (13) is connected to; and

10 means for relating the determined stationary connection block (28) to a physical location by a predetermined database.

27. Communication system according to any of the claims 17 to 26, **characterised in that** locator means comprises means for relating the first user terminal (13) to a zone (30; 30A-K) of predetermined spatial extent, said selector means having access to the identity of said zone (30; 30A-K).

15 28. Communication system according to claim 27, **characterised in that** the predetermined spatial extent of said zone (30; 30A-K) is dependent on said user identification.

20 29. Communication system according to any of the claims 17 to 28, **characterised in that** the selected data quantity comprises operational data of the industrial automation facility (40; 70; 90).

25 30. Communication system according to any of the claims 17 to 29, **characterised in that** the communication means is further arranged for communicating data to and/or from stationary user terminals.

30 31. Communication system according to any of the claims 17 to 30, **characterised in that** the communication means is further arranged for communicating data to and/or from external networks (63).

32. Communication system according to any of the claims 17 to 31, **characterised in that** the database comprises means for relating said identification to at least one of:

authorisation profile;
education profile;
organisation position; and
priority.

33. A computer program product comprising computer code means and/or software code portions that when run on a computer or processor makes the processor carry out the steps of the method of any of the claims 1 to 16.

34. A computer program product according to claim 33 supplied via a network, such as Internet.

35. A computer readable medium containing a computer program product according to claim 33 or 34.